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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,999	03/31/2004	James M. Wilson	2002-0428 (ATT.0220000)	5224

83224 7590 07/29/2009
AT & T LEGAL DEPARTMENT - NDQ
ATTN: PATENT DOCKETING
ONE AT & T WAY, ROOM 2A-207
BEDMINSTER, NJ 07921

EXAMINER	
PULLIAS, JESSE SCOTT	
ART UNIT	PAPER NUMBER
2626	

MAIL DATE	DELIVERY MODE
07/29/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/812,999	WILSON ET AL.	
	Examiner	Art Unit	
	JESSE S. PULLIAS	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 May 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/18/09 has been entered.

2. This office action is in response to correspondence filed 05/18/09 regarding application 10/812999, in which claims 1, 3, 4, 10, 11, and 12, and 17 were amended. Claims 1 and 3-17 are pending in the application and have been considered.

Response to Arguments

3. The amendment to the specification overcomes the objection to the specification, so it is withdrawn.

4. Pages 6-8 of the Remarks argue that De Brabander does not teach or disclose two new limitations added to the claims. The first limitation further specifies "generating a two-dimensional graphical representation of a call flow", e.g. claim 1 line 3. The examiner agrees with page 6 of the Remarks that "De Brabander is directed to three-dimensional visualizations". However, in response to the assertion that De Brabander teaches away from "using a two-dimensional plane", the examiner respectfully disagrees. In the paragraph cited by page 6 ([0004]), De Brabander teaches "in a 2D

plane there isn't enough place for all states". Therefore, De Brabander teaches against using *only* two dimensions in the visualization. However in [0006] De Brabander teaches using a 3D visualization. A 3D visualization is simply a 2D visualization such as length and width with an added dimension of depth. Therefore, De Brabander must teach "using a two dimensional plane" in order to teach generating the 3D visualization, for at least the reason that each point in the 3D representation is necessarily associated with e.g. a width and length coordinate. The set of width and length coordinates inherently found within the 3D visualization may be fairly considered a "two-dimensional graphical representation" as found in e.g. claim 1 line 3 for at least the reason that the rendered display represents the width and length dimensions of the object. The "comprising" in the preamble of the claim does not rule out using other dimensions as part of a further total representation in addition to the "two-dimensional graphical representation" required by the particular claim limitation and therefore is not sufficient to patentably distinguish the claim from De Brabander.

5. On page 7, the Remarks argue that De Brabander does not teach or suggest, and in fact, teaches directly away from "generating the graphical representation does not alter finite state machines in real time". First, the particular language of claims 1 and 10 only requires "generating a two-dimensional graphical representation of a call flow which does not alter finite state machines in real time", and therefore it would seem by the grammar of the claim language that the limitation "which does not alter finite state machines in real time" refers back to the "two-dimensional graphical representation" rather than the "generating" step. If the limitation is intended to refer to the actual

"generating" step, it would require clarification such as found in claims 11, 12, and 17. Regardless, in De Brabander, neither the generating step nor the two-dimensional graphical representation of a call flow necessarily alter finite state machines in real time. For example, as was pointed on in the Remarks filed 04/17/09 on page 4, in [0527] of De Brabander teaches generating the context free grammar representation (the RTN) and then generating the graphical representation from the grammar representation. The grammar, which are a series of RTNs are only altered when the user makes a change to the visual representation and therefore are not altered when e.g. the graphical representation is generated as in lines 3-4 of claim 1.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1 and 3-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Brabander (2004/0243387) in view of Yuschik (7,139,706).

Consider claim 1, De Brabander discloses a computer implemented method of generating a language model **(Abstract,** developing grammatical models within an integrated development software environment**),** comprising:

generating a two-dimensional graphical representation of a language model **([0006],** visualizing the models in 3D represents two-dimensions in addition to the third**)** which does not alter finite state machines in real time **([0527])**;

generating a context free grammar representation of the language model using the two-dimensional graphical representation **([0071-0072],** the grammar is specified in RTNs, which are a network of FSMs coded in Backus-Naur Format, which are edited visually, see **[0545-0547])**;

generating a finite state machine from the context free grammar representation of the language model, the finite state machine comprising a plurality of nodes including at least a first leaf node and at least a first root node **([0065], [0115],** the FSMs are modeled with RTNs, which are coded in Backus-Naur Format**)**; and

generating a language model application code for a language model application from said finite state machine **([0061],** compiling to create software**)**, wherein said generating language model application code for said functions are executable during runtime of said language model application for walking the finite state machine from the at least one root to the at least one leaf of the finite state machine **([0617],** links traverse the FSM**)**.

De Brabander does not specifically mention a spoken dialog application, or call flow.

Yuschik discloses a spoken dialog application and modeling the dialogue in a call flow, using its graphical representation **(Col 7 lines 23-27,** the call flow design syntax is simulated using VISEO, which is a graphical representation, see **Col 14 lines 43-40).**

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the invention of De Brabander to generate the grammar model for a spoken dialog application and call flow as taught by Yuschik, in order to realize the advantages of a user interface with the ability to receive inputs as voice signals, as suggested by Yuschik **(Col 1 lines 46-50).**

Claim 10 is directed to a computer-readable medium for implementing the method of claim 1, and so is rejected for similar reasons.

Consider claim 11, De Brabander discloses a system for generating a language model application **(Abstract)**, comprising: a processor in communication with a module **([0061],** compiling software requires a processor reading instructions from a memory), wherein the module is configured to generate a finite state machine **([0065], [0115])** from a context free grammar representation of a language model **([0071-0072])** generated using a two-dimensional graphical representation of the call flow **([0006],** visualizing the models in 3D represents two-dimensions in addition to the third), wherein generating the two-dimensional graphical representation does not alter finite state machines in real time **([0527])**, wherein the finite state machine comprises a plurality of nodes including at least a first leaf node and at least a first root node **([0065], [0115])**; and wherein the module is configured to generate application code using said finite state machine **([0061],** compiling to create software**)**, wherein the application code is generated dependent on how said finite state machine is traversed **([0617])**, for

functions to be executed upon state transitions in said generated finite state machine **([0617])**, wherein said generated application code for said functions are executable during runtime of said application **([0061])**, wherein the finite state machine is traversed from the at least one root to the at least one leaf of the finite state machine **([0617])**.

De Brabander does not specifically mention a spoken dialog application, or a call flow.

Yuschik discloses a spoken dialog application and modeling the dialogue in a call flow using its graphical representation **(Col 7 lines 23-27,** the call flow design syntax is simulated using VISEO, which is a graphical representation, see **Col 14 lines 43-40).**It would have been obvious to one of ordinary skill in the art at the time of the invention to use the invention of De Brabander to generate the grammar model for a spoken dialog application and call flow as taught by Yuschik, for reasons similar to those of claim 1**.**

Consider claim 12, De Brabander discloses traversing a finite state machine **([0617])**, that is generated from a context free grammar representation of a language model **([0071-0072])** generated using a two-dimensional graphical representation of the call flow **([0006],** visualizing the models in 3D represents two-dimensions in addition to the third**)**, wherein generating the two-dimensional graphical representation does not alter finite state machines in real time **([0527]),** and comprises at least a first root node and at least a first leaf node **([0617])**; generating application code as said finite state machine is traversed from the at least one root to the at least one leaf of the finite state machine **([0617])**, and invoking said generated application code for functions associated

with nodes in said finite state machine **([0061])**, wherein each node of said finite state machine is mapped to a corresponding function **([0066],** a state associated with a parse tree implies that state is mapped to a parsing function**)**.

De Brabander does not specifically mention a call flow.

Yuschik discloses modeling the dialogue in a call flow using its graphical representation **(Col 7 lines 23-27,** the call flow design syntax is simulated using VISEO, which is a graphical representation, see **Col 14 lines 43-40).**

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the invention of De Brabander to generate the grammar model for a call flow as taught by Yuschik, for reasons similar to those of claim 1**.**

Claim 17 is directed to a system for implementing the method of claim 12, and so is rejected for similar reasons.

Consider claim 3, De Brabander discloses the graphical representation is generated using standardized graphical elements **(Fig 8).**

Consider claim 4, De Brabander does not specifically mention the graphical representation is generated using VISIO.

Yuschik discloses a graphical representation is generated using VISIO **(Col 14 lines 48-51).**

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of De Brabander such that a graphical representation is generated using VISIO, since it is a desirable platform for decoupling user interface issues posed by the prompting structure, as suggested by Yuschik **(Col 14 lines 46-48).**

Consider claims 5 and 14, De Brabander discloses the context free grammar representation is in a Backus-Naur Form format **([0072]).**

Consider claims 6 and 15, De Brabander suggests the context free grammar representation is in an augmented Backus-Naur Form format **([0071-0072],** RTN is an extension of context free grammar, which suggests an extension, or at least an augmentation of Backus-Naur**).**

Consider claim 7, De Brabander discloses a function is associated with a node in said finite state machine **([0387],** a Function to add a looping 3DTransition between two different states**).**

Consider claim 8, De Brabander discloses customizing generated application code **([0061]).**

Consider claims 9 and 16, De Brabander does not specifically mention generated application code associated with an output function performs a table lookup prompt information.

Yuschik discloses generated application code associated with an output function performs a table lookup prompt information **(Col 5 lines 29-32, Fig 7A, 7B)**.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of De Brabander such that generated application code associated with an output function performs a table lookup prompt information, in order to increase the accuracy of the ASR technology, as suggested by Yuschik **(Col 18 lines 36-37).**

Consider claim 13, De Brabander discloses the context free grammar representation is generated from a graphical representation of said language model **([0071-0072])**.

De Brabander does not specifically mention call flow.

Yuschik discloses modeling the dialogue in a call flow using its graphical representation **(Col 7 lines 23-27,** the call flow design syntax is simulated using VISEO, which is a graphical representation, see **Col 14 lines 43-40).**

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the invention of De Brabander to generate the grammar model for a call flow as taught by Yuschik, for reasons similar to those of claim 1.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jesse Pullias whose telephone number is 571/270-5135. The examiner can normally be reached on M-F 9:00 AM - 4:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571/272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571/270-6135.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jesse S Pullias/
Examiner, Art Unit 2626

/Talivaldis Ivars Smits/
Primary Examiner, Art Unit 2626

7/27/2009